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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/792,301

03/03/2004

Der-Rong Shyu

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12/20/2005

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EXAMINER

VO, ANH T N

ART UNIT

PAPER NUMBER

2861

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

28

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/792,301	SHYU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Anh T.N. Vo	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8-29 is/are rejected.
- 7) ☒ Claim(s) 4-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/03/2004</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The references cited on PTO 1449 have been considered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 8-29 are rejected under 35 USC 103 (a) as being unpatentable over DeFosse et al. (US Pat. 5,497,178) in view of Hou et al. (US Pat. 6,527,382) and further in view of Sue et al. (US Pat. 6,260,961).

DeFosse et al. disclose in Figures 1-12 an ink jet head cartridge comprising:

- a body (13) including a first chamber (17 or 66), a second chamber (18 or 67), a third chamber (19 or 68), a first exit (36 or 71), a second exit (37 or 72), a third exit (38 or 73), an opening (a left opening that is sealed by element 56, see Fig. 3), and a channel (46, 47), wherein ink is received in the first chamber (17 or 66), the second chamber (18 or 67), and the third chamber (19 or 69) respectively, the second chamber (18 or 67) communicates with the second exit (37 or

72) so that the ink in the second chamber (18 or 67) flow directly to the second exit (37 or 72), and the channel (47) communicates the first chamber (17) and the first exit (36) so that the ink in the first chamber (17) flows to the first exit (36) via the channel (46, 47) (Figures 3 and 6-7 and 10);

- a seal member (56), disposed on the channel (47) via the opening, for sealing the channel (47) and preventing the ink in the first chamber (17) flowing through the first exit (36) from flowing out of the opening (Figure 3, column 3, lines 55-64);

- the body (13) and the channel (46, 47) are a unitary member (Figure 7);

- a chip (print head chip, not shown) including a first hole, a second hole, and a third hole, wherein the chip is disposed on the body (13) in a manner such that the first hole (not shown), the second hole (not shown), and the third hole (not shown) correspond to one of the first exit (36), the second exit (37), and the third exit respectively (38) (Figures 3 and 5, column 3, lines 3-10);

- wherein the first hole and the first chamber do not overlap (because the first chamber 17 and the first exit port 36 do not overlap Fig. 7, the first hole corresponds to the first exit port therefore the first hole and the first chamber do not overlap (Figures 3, 5 and 7);

- the second chamber (18) is located between the first chamber (17) and the third chamber (19), and the first exit (36) is located between the second exit (36) and the third exit (38) (Figures 3 and 5);

- wherein the second exit (36 or 72) and the second chamber (18 or 67) are overlapping (Figures 7 and 9-10);

- wherein the first chamber (17) and the first exit (36) do not overlap (figure 7);

- wherein the first chamber (17), the second chamber (18), and the third chamber (19) are adjacent to each other (figure 3);

- wherein the second chamber (18) and the third chamber (19) are located on the same side of the first chamber (17) (Figure 3);

- wherein the seal member (56, 57) is made of the same material as the body (13 (Figure 3, column 3, lines 59-60);

- wherein the hardness of a portion, adjacent to the opening (an unmarked left side opening), of the body is lower than the other portion of the body (Figure 15).

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- wherein the first chamber (17) , the second chamber (18), and the third chamber (19) are juxtaposed in the body (13) (Figure 3);
- wherein the seal member (56, 57) comprises: a bottom portion, closely disposed on the opening, for sealing the opening (Figure 3);
- wherein the first chamber (17), the second chamber (18), the third chamber (19) include a first inlet, a second inlet, a third inlet respectively, the ink flows into the first chamber, the second chamber, the third chamber through the first inlet, the second inlet, the third inlet respectively, and the inkjet cartridge (10) further includes a cover (11) for sealing the first inlet, the second inlet, and the third inlet (figures 1 and 3);

However, DeFosse et al. do not teach the ink in the third chamber flow directly to the third exit, wherein the first hole is located between the second hole and the third hole, the second hole and the second exit are overlapping, and the third hole and the third exit are overlapping; the third exit and the third chamber are overlapping; the seal member comprising an extended portion extending in the channel and corresponding to the shape of the channel so that the ink in the first chamber flows smoothly in the channel and the first chamber includes a through hole abutted by the extended portion of the seal member; and a fourth divider plate for separating the first chamber and the second chamber; and a fifth divider plate for separating the second chamber and the third chamber, wherein the fourth divider plate is not parallel with the fifth divider plate.

Nevertheless, Hou et al. teach in Figure 2 an ink container comprising:

- a housing body (52) including the third chamber (64) communicates with the third exit (72) so that the ink in the third chamber (64) flow directly to the third exit (72),
- a chip (56) including a first hole (a middle unmarked hole of a chip 56), a second hole (a left unmarked hole of printhead chip 56), and a third hole (a right unmarked hole of printhead chip 56), wherein the chip is disposed on the body (52) in a manner such that the first hole , the

second hole, and the third hole correspond to one of the first exit (72) , the second exit (68), and the third exit (72) respectively;

- wherein the first hole (a middle unmarked hole of a chip 56) is located between the second hole (a left unmarked hole of printhead chip 56) and the third hole (a right unmarked hole of printhead chip 56), the second hole and the second exit (72) are overlapping, and the third hole and the third exit (72) are overlapping; and
- the third exit (72) and the third chamber (64) are overlapping.

Furthermore, Seu et al. suggest in Figures 1-2 and 11-12 an ink jet cartridge body comprising:

- the seal member (222, 224) comprising an extended portion (222A, 224A) extending in the channel and corresponding to the shape of the channel so that the ink in the first chamber (84) flows smoothly in the channel and the first chamber (84) includes a through hole (98) abutted by the extended portion of the seal member (222, 224) (column 4, lines 48-55); and
- a fourth divider plate (80) for separating the first chamber (84) and the second chamber (86); and a fifth divider plate (82) for separating the second chamber (86) and the third chamber (88), wherein the fourth divider plate (80) is not parallel with the fifth divider plate (82).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teaching of Hou et al. and Seu et al. in the DeFosse et al. ink jet print head cartridge the purpose of preventing ink from one side channel from mixing with ink from the other side channel and shortening the distance that the ink must traverse through the channels in order to reach the orifices of a printing head.

#### ***Citation of Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art (US Pat. 5,119,115; US Pat. 5,926,195; US Pat. 6,840,609; US Pat.

6,893,120) cited in the PTO 892 form show an ink cartridge that is deemed to be relevant to the present invention. These references should be reviewed.


***Allowable Subject Matter***

Claim 4 is allowable if rewritten to include all of the limitations of the base claim and any intervening claims. This claim would be allowable because none of the prior art references of record discloses an inkjet cartridge comprising a first divider plate for separating a first chamber and a second chamber, wherein the first hole, the second hole, and the third hole of a chip are aligned in a straight line, the straight line is substantially parallel with the first divider plate in the combination as claimed.

Claims 5-7 are allowable if rewritten to include all of the limitations of the base claim and any intervening claims. These claims would be allowable because none of the prior art references of record discloses an inkjet cartridge comprising the third hole of a chip that is located between the first hole of the chip and the second hole of the chip, the second hole and the second exit of a second chamber are overlapping and the third hole and the third exit of a third chamber are overlapping in the combination as claimed.

***CONCLUSION***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M..  
The fax number of this Group 2861 is (571) 273-8300.

  
ANH T.N. VO  
PRIMARY EXAMINER  
December 11, 2005